

Mount John University Observatory

SOUTHERN DAMON PATROL

Subcontractor's Final Report

1989 November 7

The report of interest because it enumerates the number of 'blue' plates
taken during the patrol, which ran from 1981 to 1989



Department of Physics
University of Canterbury Christchurch 1 New Zealand

Telephone: +64 3 642531 (office)
+64.3.489585 (home)
(GMT + 12 hours)

Telex No: NZ4144 UNICANT
FAX No: +64 3 642 999

Dr Martha Hazen,
Harvard College Observatory,
60 Garden Street,
Cambridge,
MA 02178,
United States of America.

1989 November 7

Dear Dr Hazen,

Damon Patrol

The final shipment of plates (2 crates) was dispatched carriage-paid airfreight from Christchurch last week, and may already be with you.

I now enclose the Subcontractor's Final Report on the Patrol: my apologies for its being overdue.

With best wishes,

Yours sincerely,

(William Tobin Ph.D.)

Electronic mail: Colour Book: W.TOBIN or PHYS146 at NZ.AC.CANTERBURY;
From UK: W.TOBIN or PHYS146 at nz.ac.canterbury@uk.ac.ean-relay;
PSI Mail: PSI%0530130000034::W.TOBIN or PSI%0530130000034::PHYS146;
Internet: W.TOBIN%CANTERBURY.AC.NZ@RELAY.CS.NET or
PHYS146%CANTERBURY.AC.NZ@RELAY.CS.NET
Uucp:vuwcomp!canterbury.ac.nz!phys146 or
vuwcomp!canterbury.ac.nz!w.tobin



Department of Physics
University of Canterbury Christchurch 1 New Zealand

Subcontract Under NSF Prime AST-85-19326

SUBCONTRACTOR'S FINAL REPORT

by

William Tobin, Ph.D.,
Subcontract Project Director
Department of Physics
and
Mount John University Observatory
University of Canterbury
Christchurch 1
New Zealand

1989 November 7

Subcontract to the University of Canterbury Under NSF Prime AST-85-19326
to Harvard University

SUBCONTRACTOR'S FINAL REPORT

Statement of Work

*Continuation of the Southern Damon Patrol at the Mount John Observatory :
to include the operation and maintenance of the cameras, taking and shipping of
the astronomical plates to the Harvard College Observatory, and plate stacks for
archiving.*

The subcontract, including various extensions, ran from 1986 September 1 to 1989 August 31, and continued the southern sky patrol begun in 1981 under earlier subcontracts. The Subcontract Project Director was Dr John B. Hearnshaw until 1988 December 20, when he was replaced by Dr William Tobin.

Over the period of the present subcontract 855 patrol plates were taken with the 'blue' Damon camera at the Mount John University Observatory, Lake Tekapo. The camera was operated by the Observatory Superintendent, Mr M. Clark.

Kodak IIaO plates 8 inches by 10 inches were used in combination with a blue filter provided by Harvard College Observatory. The plates were generally developed for 8 minutes in D-19 at 20°C. Periodically, developed plates were airfreighted to the Harvard College Observatory for addition to the archive. The final shipment of two crates of plates was despatched from Christchurch on 1989 November 2.

The table on the following page reports the number of 'blue' plates* taken over the entire southern Damon Patrol in New Zealand.

* In early years some 'red' plates were also taken using Kodak 103aF plates with an RG1 filter. They too were developed for 8 minutes in D-19 at 20°C.

Table: The number of 'blue' plates taken over the entire southern Damon patrol in New Zealand.

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	MEAN	STANDARD DEVIATION
1981	12	25	29	15	24	0	7	30	4	23	9	10	188	16	10
1982	2	0	10	16	4	31	16	19	13	8	0	13	132	11	9
1983	6	26	8	11	2	32	12	9	9	8	18	27	168	14	9
1984	44	35	9	53	45	33	46	19	54	13	9	10	370	31	17
1985	12	32	38	35	45	30	20	39	33	32	17	7	340	28	11
1986	12	21	31	36	24	31	10	17	35	22	7	26	272	23	9
1987	24	20	30	1	34	46	40	36	15	24	33	13	316	26	12
1988	17	10	27	60	18	41	28	20	30	0	20	25	296	25	15
1989	5	30	24	14	0	43	0	11	26	/	/	/	153	17	14
SUM	134	199	206	241	196	287	179	200	219	130	113	131			
MEAN	15	22	23	27	22	32	20	22	24	16	14	16			
STANDARD DEVIATION	12	11	10	19	16	13	15	10	15	10	10	8			

It will be seen that the (austral) autumn/winter produced most plates. This results from a combination of autumnal good weather and long winter nights.

The 'red' and 'blue' Damon cameras remain on site at Mt John until a decision is made about their future.

Should the Patrol be refinanced at a future date, Mr Clark remarks that the southern sky could be surveyed with only twenty or so plate centres rather than the 72 that were used in the present programme. This could result in a considerable saving of costs, with only a small scientific loss through lack of redundancy.

A handwritten signature in cursive script that reads "William Tobin". The signature is written in dark ink and is underlined with a single horizontal stroke.

William Tobin, Ph.D.
Subcontract Project Director